

WHAT IS CLAIMED IS:

1. A method of producing an alkaline storage battery equipped with electrode group having alternately stacked positive and negative electrodes via separators, which is placed in a 5 metal-made outer casing such that the core plate of the electrodes disposed at the outermost side of the electrode group are exposed and the exposed core plates are in contact with the metal-made outer casing, said method comprising:

    a coating step of coating an active material slurry

10 comprising an active material, a binder, and a solvent for the binder onto both surfaces of the core plate;

    a drying step of drying the electrode coated with the active material slurry;

15 an active material removing step of removing the active material of the side of forming the exposed surface of the core plate; and

    a solvent-attaching step of attaching the solvent for the binder from the exposed surface side of the core plate.

20       2. A method of producing an alkaline storage battery equipped with electrode group having alternately stacked positive and negative electrodes via separators, which is placed in a metal-made outer casing such that the core plate of the electrode disposed at the outermost sides of the electrode group are exposed

and the exposed core plate are in contact with the metal-made outer casing, said method comprising:

5 a coating step of coating an active material slurry comprising an active material, a binder, and a solvent for the binder onto both surfaces of the core plate;

a drying step of drying the electrode coated with the active material slurry;

10 a solvent-attaching step of attaching the solvent for the binder from the active material layer side forming the exposure surface of the core plate; and

an active material-removing step of removing the active material of the side forming the exposed surface of the core plate.

3. The method of producing an alkaline storage battery  
15 described in claim 2, wherein the step of removing the active material is carried out, after the above-described solvent-attaching step, in the state that the electrode attached with the solvent for the binder is undried.

20 4. The method of producing an alkaline storage battery described in any one of claims 1 to 3, wherein the solvent in the solvent-attaching step contains the binder.

5. The method of producing an alkaline storage battery described in any one of claims 1 to 3, wherein attaching of the solvent in the solvent-attaching step is carried out by spraying.

5 6. The method of producing an alkaline storage battery described in any one of claims 1 to 3, wherein the electrode is hydrogen absorbing alloy electrode using a hydrogen absorbing alloy as the active material, which can reversibly carrying out electrochemical absorbing and desorbing of hydrogen.

10

7. A method of producing an alkaline storage battery equipped with a spiral-form electrode group formed by rolling a negative electrode coated with a hydrogen absorbing alloy powder and a positive electrode via a separator in an outer casing, said

15 method comprising:

a coating step of coating a hydrogen absorbing alloy slurry comprising the above-described hydrogen absorbing alloy powder, a binder, and a solvent for the binder onto both surfaces of an electrically conductive core plate to form a coated electrode;

20 a drying step of drying the coated electrode to form a dry electrode;

a solvent-attaching step of attaching the above-described solvent for the binder to the surface of the dry electrode; and

a low-temperature drying step of drying the dry electrode at a temperature lower than the drying temperature in the above-described drying step.

5        8.        The method of producing an alkaline storage battery described in claim 7, wherein in the above-described solvent attaching step, the above-described solvent for the binder is attached to at least one surface of the above-described dry electrode of the portion becomes the initiating portion or the  
10      end portion of rolling the above-described negative electrode in the case of forming the spiral-form electrode group or to the whole surface of the dry electrode.

9.        The method of producing an alkaline storage battery  
15      described in claim 7 or 8, wherein the amount of the solvent for the binder attaching to the surface of the dry electrode is from  $3 \times 10^{-5}$  g/mm<sup>2</sup> to  $5 \times 10^{-5}$  g/mm<sup>2</sup> per unit area of the above-described negative electrode.

20      10.      A hydrogen absorbing alloy electrode comprising: an electrically conductive core plate having attached thereto a mixture containing at least a hydrogen absorbing alloy powder and a binder capable of re-dissolving, wherein the mean particle size of the hydrogen absorbing  
25      alloy powder is not larger than 60  $\mu\text{m}$ , and the packing density

of the hydrogen absorbing alloy electrode is at least 4.85 g/cm<sup>3</sup>,  
and

the hydrogen absorbing alloy powders each other and the  
hydrogen absorbing alloy powder and the electrically conductive  
5 core plate are adhered by the above-described binder capable of  
re-dissolving.

11. A method of producing a hydrogen absorbing alloy  
electrode comprising an electrically conductive core plate having  
10 attached thereto an active material slurry containing at least  
a hydrogen absorbing alloy powder, said method comprising:

a coating step of attaching an active material slurry  
comprising a hydrogen absorbing alloy powder having a mean  
particle size of not larger than 60  $\mu\text{m}$ , a binder capable of  
15 re-dissolving on the above-described electrically conductive  
core plate to provide a slurry-coated electrode;

a drying step of drying the slurry-coated electrode to  
provide a dry electrode;

a pressing step of pressing the dry electrode to provide  
20 a pressed electrode; and

a solvent-attaching step of attaching the above-described  
solvent for binder to the surface of the pressed electrode;

wherein the hydrogen absorbing alloy powder is attached  
to the electrically conductive core plate at a packing density  
25 of at least 4.85 g/cm<sup>3</sup>.

12. A method of producing a hydrogen absorbing alloy electrode comprising an electrically conductive core plate having attached thereto an active material slurry containing at least

5 a hydrogen absorbing alloy powder, said method comprising:

a binder-coating step of coating a binder solution comprising a binder capable of re-dissolving and a solvent for the binder onto the above-described electrically conductive core plate;

10 a coating step of coating an active material slurry containing a hydrogen absorbing alloy powder having a mean particle size of not larger than 60  $\mu\text{m}$  onto the electrically conductive core plate coated with the binder to provide a slurry-coated electrode;

15 a drying step of drying the slurry-coated electrode to provide a dry electrode;

a pressing step of pressing the dry electrode to provide a pressed electrode; and

20 a solvent-attaching step of attaching the solvent for the binder to the surface of the pressed electrode,

wherein the hydrogen absorbing alloy powder is attached to the electrically conductive core plate at a packing density of at least 4.85 g/cm<sup>3</sup>.

13. The method of producing a hydrogen absorbing alloy electrode described in claim 11 or 12, further includes a low-temperature drying step of drying, after the solvent-attaching step, the electrode attached with the solvent 5 at a temperature lower than the drying temperature in the above-described drying step.

14. The method of producing a hydrogen absorbing alloy electrode described in claim 13, further includes a re-pressing 10 step of repressing, after the above-described low-temperature drying step, the electrode dried at the low temperature.

15. The method of producing a hydrogen absorbing alloy electrode described in claim 14, wherein a magnitude of pressing 15 force in the re-pressing step is defined not to decrease a thickness of the pressed electrode more than 10% thereof.

16. An alkaline storage battery comprising:  
an electrode group having negative electrode described in 20 claim 10 and positive electrode via separators; and  
a metal-made outer casing for containing said electrode group therein.

17. The alkaline storage battery described in claim 16, wherein the negative electrode is disposed at the outermost side

of the electrode group and the negative electrode is in contact with the inner surface of the metal-made outer casing.